262 The grubs (om´nol) of horseflies and of bees were eaten; the bees were smoked out with a damp tule smudge. The ground wasp (po'a´onai) larva was said to be eaten by the Telamni (it was scarce in the tular). This was called
[252] tap:si, was roasted on coals and eaten with acorn mush. Caterpillars (mane´ča) were skinned (singed?) and eaten.

[225] Turtles (ṭu´ñkot) were plentiful. They were stabbed under the throat with a sharp stick, put on hot coals, and roasted; then the shell was broken off and the larger entrails were discarded.

●226 A great variety of fish was available for all the lake people. The Chunut informant
262 spoke of the following. "Greaser" fish (tawa´'at) was a black fish with a large head and small body. The chub (tu´konu) had "fat all over his tail." The steelhead (?) or "lake trout" was called e´p:s. The brook trout (?) (so´lul) was colorless save for a red edge on its forked tail. The minnows or young of any fish were called ta´h:s. Salmon (da´ṭu) were well known and greatly depended upon, but eels were said to appear only at Sanger on the Kings River. A certain fish (u´duṭ) had a large head like a catfish but was not the same thing, for catfish were called tamṭa´na "because he has whiskers" (tamu´ṭanin, whiskers he has). The crayfish (keṭa´keṭat) were common, as were water mussels (ka´paṗ, the shells; ṭa´s:p, the flesh). Abalones (ṭo´n:k) were known only by their shells which were brought in from the coast.

226 Fishnets (to´noi) were dragged between the shore, where one end was fastened, and a balsa which moved in an arc toward the shore. Diving for fish was a common practice, as in the foothills. The Tachi procured fish for Estudillo by diving with hand nets.

At 9 A.M. came four Tache chiefs...Thirty-seven young men accompanied them, all of them prepared with hand nets for catching fish in this San Gabriel [Kings] River. This they did
[147] before my very eyes, with great agility, diving quickly and staying under the water so long that I prayed. Some remained under five credos [during five "Lord's prayers"], others no less than three.[36]

A corral (wise''i) for catching fish was made in shallow waters by setting up button-willow stakes and intertwining them with tules. Persons waded about with baskets catching up the fish which others drove into the corral. This method of fishing was seen by Mayfield, whose description is included for its graphic qualities. It appears that it was the Choinimni who used the weir while at the lake.

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[36]Gayton, Estudillo, 78.

●226 The tribe I was with had an interesting way of catching fish on the lake shore. A weir of willow wicker work was built out at an angle from the shore for a distance of fifty or sixty yards. Then a large group of Indians would wade out beyond the weir and close the opening. This group would form a semicircle sometimes a mile long.

After the circle was completed they would close in, all splashing and yelling and driving the fish into the shallow water behind the weir. In this shallow water were two or three Indians wading about, each with one of the bottomless [sic] wicker baskets that they used up the river for catching fish in pools. When they felt a fish with their feet or saw a ripple made by a fish they would clap the basket down and catch it. It was not possible to see the fish as the shallow water soon became very muddy.[37]

Another type of weir, consisting of two long wings, was erected in shallow water. No drive was made; men waded in in the early morning and dipped up fish with hand nets (po´hač).

According to Mayfield a special raft for fishing and hunting was used by the Tachi at Tulare Lake.

[501] This raft was constructed in a different way.... It was wide and flat and would pass over very shallow water. It was pointed at the ends, but the points were not raised as they were in the raft used on the river.

In the center of the fishing raft was a large hole. Through this hole fish were gigged much as they were from the platform on the river above.

A few feet ahead of the hole was an earthen, or mud, hearth. On this hearth a fire was kindled, and the cooking was done.

He also describes a novel method of fishing in the tular.

Tules will float on the water, and the Indians make use of their buoyancy. On the lake, and sometimes in sloughs along the river, the tules used to float about loose. The wind would drift them into great mats near the shore. The fish used to collect under these mats and we used to walk over them and spear fish from them.[38]

227 The Tachi fishing implement, as described by M.G., was a single-pointed harpoon (to´´okoi). The hooked point, about two inches long was made of a pelican wing bone which was lashed to the detachable foreshaft with sinew. The foreshaft, about one foot long, was attached to the oak handle by means of a length of tule fibre cord.

226 Fish poison (yao´ha) was made from a white

[37] Latta, Uncle Jeff's Story, 32-33.

[38] Ibid., 30,32.

[P. 15b] Tachi

226 278 Fish poison (yad'ka) was made from a white flower which was pulverized and thrown over quiet water or a pond. The fish were scooped up in baskets as they came to the surface. The same flower was used in an infusion for headaches; it grows commonly on the plains (not identified). Another poison, undescribed, called t:'l:l, was mentioned by M.G.

223 Ducks, mudhens, and other water fowl were caught with nets set up among the tules, but the exact manner of operation of the nets could not be described. The Wowol secured ducks for Estudillo; "...in less than half an hour, within my sight, they caught many with snares which they had in the lake."[39]

Again Mayfield supplies an eyewitness description from the Tachi.

Sometimes three or four Indians would go out on the lake on one of the fishing rafts and hunt ducks and geese and stay out there as long as a week. During this time they poled the raft around through the tules and ate and slept on it.

They would throw loose tules over the raft and themselves, forming a blind. Then, through the hole in the center they would slowly pole the raft...In this way they would approach within a few feet of ducks and geese and shoot them from the blind with bows and arrows.

Sometimes they would catch the ducks that flew overhead with a net. This net was a good deal like the net fishermen use to take trout out of the water after they have hooked them. It was about two feet across the mouth. They also snared ducks and geese among the tules.[40]

222 Of vegetable foods, šopas (arrowhead?) was the staple.[41] It was not put in a mortar at first, but in a depression in the ground, where it was trampled. The leaves and seed pods were [252] picked out; the seeds were put in a mortar and pounded. The flour, wetted with water, formed a mush called so´pas:n sa´sa. There is a doctor's song about this foodstuff.

[251] Tule roots (pu´muk) were gathered, dried, pounded, and used as a flour for mush. Tule seeds (tsos)were also used. Before they ripened, the tule heads were tied together in bunches where they were growing. When ripe, the seeds were knocked off into a basket and the heads released. In February J.A. said, "We should be going around now to see how they are getting along. Then maybe next month tie them up."

Acorns in the neighborhood of Kingston [481] were available to the Tachi. They went up there after them; men climbed the trees and shook down the acorns with hooked sticks while women collected them in burden baskets.

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[39] Gayton, Estudillo, 72.

[40] Latta, Uncle Jeff's Story, 32.

[41] On another occasion J.A. said šopas was a plant with "large leaves and red berries."

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
EP 75a

223 349 A floating hunting blind, described by S.G., was used by Wukchumni and Gawia on quiet waters, particularly on Woodlake. Two logs about 6 feet long were tied together about a foot from each end with willow-root withes. Horizontally along each side, just at the center, was a long rod held in place by the same bindings. Into the long slot between the rod and the side of the log to which it was fastened, were inserted the butt ends of long round tules, about 4 to 6 feet tall, previously twined together at the butts. The tops of these were drawn together forming an apex over the narrow raft. If the shelter were well made, the tule tops would be sewed together with string (čitᵊk) on a wooden needle, but if poorly made the tops were tied together in small bunches (see fig. 11). This [501] floating shelter was used chiefly for duck hunting with bow and arrows. It was poled about, usually by men who worked in pairs, one to pole, the other to shoot.

224 Small game.---S.G. described two traps for small animals. The first, intended for rodents, was merely one large flat rock propped above another by means of a small stick. The bottom of the stick rested on the bait -- usually a roasted acorn -- and gave way when the bait was nibbled. The second was a spring trap set up on the trails of quail, cottontail rabbits, ducks, or geese. A small supple limb was set in the earth if none grew naturally at the desired spot. To its tip was fastened a noose of string (čitᵊk), the cord of which was tied to a horizontal bar pegged about six inches off the ground. Any creature caught in the noose struggled sufficiently to release the horizontal bar, and animal and bowed limb flew upward.

[136] Of small animals the following were trapped: ground squirrels (po·hot), tree squirrels (sa·ñsañwide·''ᵊt), gophers (hu·ñhed) and chipmunk (aho·''ŏt).

Smoking out, with aid of the feather fire fan, was the most common method of catching ground squirrels (see Michahai-Wakschi, Pt. II).

A flexible stick with hooked end was used for pulling rodents from their burrows or hiding places. Ground squirrels were forced out or stupefied by smoking. Entries to their burrows were plugged with grass which was fired and kept burning by drafts from a feather fire fan. As the animals attempted to escape or get air at openings they were dragged out with the hook, seized, and their necks broken. A hooked stick of this type in the University of California collections (No. 1-4036) is 49 inches long, approximately 1/4 inch in diameter (fig. 10, a).

Fishing

226 227 The fishing harpoons were 7 to 12 feet long; different lengths were used for different

226 depths of water. The handle (hoiš) was of
227 elderwood. According to one informant (J.P.) the handle [more probably a part of the handle] could be detached entirely if one was working under bushes, but this does not agree with other information. Two hollow shafts of deer
[237] tibia (to´koi) were lashed on one end, and into these were fitted bone points (pi´če tu´h´na) about 2 inches long. A cord with about 2 feet of "play" leashed the point to the main handle. The point was essentially a toggle when freed from its housing, the attaching cord usually being fastened to it by wrapping and sealing with pitch or asphalt.[182]

[321] A separate harpoon point in the University of California Museum of Anthropology (1-10422) has a cord 28 inches long, is of bone, and is 3-3/4 inches in length. Another (no. 1-3954)
[325] is a one-piece togglehead, slightly over 3 inches long (79 mm.) of iron or steel; is perhaps a tine from a rake. A 2-ply cord is laid against the middle of this and probably lashed around several times and then is fastened to the metal by a dark substance which may be asphalt or pitch. It has in it grains of some mineral substance which looks like feldspar from decomposed granite. (These might be a by-product from the melting of the gum.) The length of the free string is about 21 inches.[183] Both specimens are from the Chukchansi Yokuts.

Weirs of willow were set across rivers or
226 streams at suitable places. The willows used were about finger thickness and 3 feet long. They were interwoven with willowbark rope. Into the weir and facing upstream were set cylindrical baskets 6 to 10 feet long and 12 to 18 inches in diameter; as many as three of these might be used. If fish were needed in a hurry, men, women, and children would wade downstream driving fish ahead of them into the basket traps. Ordinarily the baskets were left overnight, when sufficient fish would have accumulated in them by morning.

A favorite method of catching fish in
226 pools was by stupefaction. Two plants were
278 used. One, ta´dad, was a plant which grew near streams. It was mashed fine, put in sifting baskets, and shaken out over the surface of the water. This "made the fish crazy"; as they jumped about near the surface they were grabbed in the hands and scooped up in large openwork baskets. The other plant, ya´oha, "grows on the mountains." It was soaked in
[522] water and mashed with a stick, and the mass put in the fishing hole. The person who performed this service was facetiously referred to as a doctor (añṭu). Kroeber mentions two other

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[182] One informant claimed the point was drilled and the cord tied through the hole. This seems unlikely as no such attachment is reported from any other Yokuts or neighboring tribe.

[183] Description, kindness of Dr. A.L. Kroeber.

poisons: buckeye nuts ground with earth, and crushed nademe leaves.[184] As the large fish became stupefied, men "gigged" them, while the women secured the smaller fish in baskets.[185]

Diving for fish was an indulgence of an able swimmer. Such a man (J.P. was said by all who knew him to be an expert at this) would swim down under water fifteen to twenty feet and seize an unwary fish in his hand. If possible a handful of sand was taken along or grabbed off the bottom to aid in holding the slippery fish, but an expert thrust his thumb under the gills. It took much practice to do this, and the skill is better regarded as a pleasurable stunt than as a fishing method.

FOODS, UTENSILS, MEDICINES

Meals and Foods

Three meals a day, breakfast (wa'ad), lunch (ču'ka), and supper (do'ntau) were designated by M.L., but other informants (M. and J.P., S.G., etc.) say there were only two. Certainly two fit the general aboriginal pattern better, as known here and elsewhere. Breakfast consisted of hot acorn mush and a little meat. Everyone of any character was up before sunrise, the breakfast was eaten at about that time. The evening meal was much larger and had added to the staple mush and meat such extras as the day provided--"greens," fish, pigeons, seed cakes, and so on. The evening meal was taken just before sundown. Both men and women had "snacks" during the day; children ate as often as they pleased; this may be a continuance of the unregulated nursing pattern.

Generalizing about food habits, M.L. said that the Tachi did not like deer meat, that the Wukchumni did not eat larvae although "people up north" (Hoshima) did, and that the Waksachi all ate bear.[186] Coyote and fox were not eaten but wildcat and raccoon were considered very good, as were squirrels, woodrats, quail, doves, and pigeons. Some persons, amongst those whose totemic tabus permitted it, ate bear and cougar, but most people looked askance at bear meat. For instance, S.G., having no prohibitions to prevent it, once ate bear meat which was cooked rather rare. Directly he ate it, he felt nauseated and vomited the food; he maintained that this would never have happened with any other kind of meat. As for cougar meat, chiefs never touched it because this animal had been a chief in the mythical prehuman era.

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[184] Handbook, 529.

[482] [185] Fish were never put in burden baskets as the moisture softened the seaproot stiffening.

[186] Deer meat was scarce for the lake people; other informants show that the Wukchumni did eat larvae; and certain Waksachi would have died rather than eat bear meat.

276 inder so that it might be worn on a cord about the neck. A hunter or traveler would wear one: when one was faint from hunger, frightened by a dream or the sight of a ghost, a small bite off the pulčina would restore the powers of locomotion.

A man kept his tobacco cake in a little deerskin sack.

[757] The cake tobacco (šogen) was eaten in minute quantities, or pounded up with shell lime and water and taken as an emetic, or [109] broken up and smoked in a cane pipe. A liquid made from tobacco was smeared on the feet and ankles to discourage rattlesnakes.

[517] A group of men would gather at one house about eight or nine o'clock in the evening to eat tobacco and lime. Women did not actively participate in these parties but might and did indulge in family privacy. Women and children were present, however, sitting in the background; the children were often asleep. This group partaking might be done on an evening before a hunt, or the mixture might be taken as a tonic for good health or to stimulate dreaming.

The host had a small mortar (koi´w:š) and pestle (pa´'lwi) especially for the purpose. A piece of baked shell was pulverized in the mortar, then a piece of cake tobacco pounded with it, and water poured in to make a thin liquor. The mortar and pestle were passed from man to man, each one taking a lick off the pestle; it did not matter which way it was passed. J.P.'s pestle had some small indentations in its side and he laughingly said those were there so more liquor could be got and licked off. As the men became nauseated they went forth to vomit, thence home "to sleep like drunk" (J.P.) (se´lswi ta´na šogo´ni na, dizzy to go tobacco-from I). Those who were going hunting or who were seeking supernatural power would eat only acorn gruel on the following morning. The same performance might be repeated on several successive nights, each time at a different house.

When women wanted to obtain nauseating effects from tobacco, they merely licked a cake directly (M.P.).

M.P.'s uncle and aunt ate a little tobacco every night: "a person couldn't sleep if they went to bed full."

[226] The shell used for the lime constituent was the freshwater oyster; the shell alone was called či´'u, the whole thing "when alive," [481] ka´'up:č. The oysters were got at Woodlake; men dove for them or reached down off rafts; they were just visible on top of the mud.

Pipes.---A cigarette of cane (ka´dk:d) was cut 6 to 8 inches long. The mouth end was filled with a little coil of fine cord, and tobacco, crumbled into tiny pebble-like pieces, was packed into the other end. The cigarette was ignited with a glowing twig. The cane burned down as it was smoked, yet it lasted a

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P. 165b] Kechayi

231 other old man." Its new owner caught salmon and squirrels for it. He would put a piece of meat on the end of a stick, and the falcon would fly down, sit on the stick and eat the meat. The bird cried out when it was hungry.

E.M. recalls that her father (Nutuwich) kept a white owl for a pet. The children were amused because it appeared to be headless when it was asleep.

E.M. herself raised a flock of baby quail, but they were devoured by a snake.

So far as E.M. knows, no cubs were ever raised as pets.

An old Kechayi man, Hečač, who caught the falcon, had two fawns which he raised. They came when he called.

One man raised a pet coyote, but "it got too mean" so he took it to the hills and released it.

First Fruit Rites

796 These rites were all called nahala'oša, the term used for a girl's first menses ceremony. At least three were held, for acorns, seeds, and salmon, all having the same name and same essential procedure.

796 222 616 Acorns.--The Nutuwich men knocked down all the acorns, which were gathered and stored, as usual, by Tokelyuwich women; many of the women were, of course, wives of the Nutuwich men. When the correct month arrived,[63] the Nutuwich chief sent word to the Tokelyuwich chief that it was time for the ceremony. This the Tokelyuwich prepared for by grinding, leaching, and cooking acorns of the recent crop, and arranging the food to be served in front of their chief's house. Then the Nutuwich people came. The Tokelyuwich host-chief made a speech about the new food,[64] and his winatums and their wives served the food to the Nutuwich chief and the people with him. Thereafter the Nutuwich people could make use of the new crop, but the Tokelyuwich continued to use nuts from the old crop until the spring salmon ceremony.

There is no association of the Bear Dance with the gathering or first eating of acorns.

Seeds.--In the summer the winatum went about telling people that it was time to gather the seed crop. The Nutuwich people went first and took all they wanted; when they were through, the Tokelyuwich gathered what was still available. The Nutuwich "ate the seeds right away," but when the Tokelyuwich were free to do so is not clear.

226 616 796 Salmon.--When the Pleiades were on the western horizon at dusk it was time to watch for the first salmon. When the Nutuwich chief learned that the run was approaching he sent

[63] E.M. thinks this was November.

[64] On one occasion B.W's wife made the speech.

226 616 796 "all Nutuwich men out to catch salmon." Meanwhile the Tokelyuwich got out their "new" acorns, of which they had not yet partaken. Members of each moiety cooked the foods which they were responsible for, and a general feast was held at the river's edge. Everyone dressed in his best.

The first salmon caught was laid on a basket tray. This the Nutuwich chief held in his hand while he made a prayerful speech to the salmon, asking it "not to hurt the Nutuwich who were going to eat it." He told the people to be happy because many more fish would be coming. The Tokelyuwich chief, holding a basket of acorn meal, made a comparable speech to the acorns on behalf of the Tokelyuwich people. Thereupon, the Tokelyuwich all ate salmon with the acorn mush. Immediately after them the Nutuwich partook of salmon also.

During the rest of the day games were played, and at night more games and dancing served as entertainment.

A salmon ritual held at Očo´po, a Gashowu village, was recalled by E.M. The village was not directly on the river but they all went there for the feasting and returned to the village for the games.

262 616 Deer.--Deer and bear meat were tabu to the Nutuwich, which somewhat "balances" the "new" acorn tabu which the Tokelyuwich suffered. It seems difficult to believe that a staple meat such as deer could be eschewed entirely, but E.M. was positive in her statements. The tabu included antelope. "They used rabbits instead," E.M. claimed.

When a man killed a deer (the hunter would necessarily be Tokelyuwich) the camp manager or spokesman (yate'ič) went about "telling the women to get their acorns ready because there would be deer for supper." He said that "deer is the best meat and, if any one failed to come, a little piece would be saved and taken to him." The deer were then cut up, the head [252] roasted in ashes, and the other parts broiled. The chief was given a ham, considered the best part.

The hunter who had brought in the game could not eat meat from the first deer he had killed on this occasion, but took meat from some other. This tabu held for all hunting occasions, according to this informant, and was not merely the "first kill" tabu for a young hunter on the occasion of his first hunt.

LIFE CYCLE

Birth and Infancy

843 Only women who had to did heavy work during the last three months of pregnancy. There were no definite food tabus before birth, although some women ate only soft food from preference. After the birth occurred, the

579 674 horse, got on it, drove a bunch of horses this way, back across the water at the same ford, and so on across the valley and back up here. Maybe at Picayune they would kill two horses for the Indians there. Brought the rest up [492] here. Maybe some people wanted a horse, so they didn't kill that one, but kept it to ride. When those horses were all eaten up, some time, they would go down again.

224 492 When they had horses here, they would go down below Raymond to the valley for elk. There they would separate into two parties and go around in a circle. Maybe they would see the elk going ahead of them. The elk would go faster than the horses. So they didn't run after the elk, but went sideways to head them off; drove them, thus, in the direction they wanted. They could see a long way, for this was on the plain. They never chased the elk directly, but at an angle; made them go in the direction they wanted. Then they closed in on them. The riders had no saddles, only a little rope (a ja´quima, presumably). But they had guns. When they had caught up with the elk, they couldn't get away. When one tried to break through, a man would shoot it through the heart. Then they let it go. They would find it later. They had to attend to the others that weren't yet shot. Later, when all had been caught or had got away, they went back to find those that had been shot and left to fall. They left none of that meat there; it was all brought up here.

579 674 Such raids were made occasionally in the summer, possibly in the spring, but J.R. thinks only in the summer season.

Fishing

226 227 Chukchansi people used to go down to Gashowu and Kechayi territory [near Friant] to spear salmon on the San Joaquin River. They had their own fish camp, as had other tribes, right at the river. Salmon were always speared with a harpoon. J.R. did not know what was [177] used for a point before nails were introduced; sharply filed nails are now used. In the harpoon, the point is loose in the shaft head but fastened to the pole with a string five or six feet long. When a fish is speared the point comes off the shaft head and the pole, remains in the fisher's hand. The pole (spear shaft or handle) was about six feet long. When the fish was pulled in, it was knocked on the head with a stone; then the forefinger was inserted in the wound and the toggle-point extricated.

226 When several men fished together they divided their catch at the riverbank; there might be about two fish to a man. The fish [482] were run through the gills by a withe, which was then twisted onto itself and slung over the shoulder. At the camp a good coal fire was [253] ready, and one salmon would be slit open and roasted for immediate eating: this would serve four or five men.

226 four or five men. [No mention was made of a first salmon ceremony, but this may be what the informant, J.R., had in mind. -- A.H.G.]

252 251 The fish were dried at the camp. The implication is that men did all the work connected with salmon fishing, but it was not so stated. The fish were cleaned by slitting full length down to the backbone. For better drying, the flesh would be slit again so the sections would be thinner. As a supporting rack, slender sticks were laid across the lower limbs of trees or sturdy bushes. The fish were hung horizontally on these, the flesh hanging down each side. They were frequently turned around [482] so the sun got at all parts. They were put in a sack [skin?] and packed home with a tumpline. A man carried about two hundred pounds of fish. At home, the fish were taken out and hung on sticks across the roof of the storehouse, so they would not spoil. Such dried salmon were eaten before they got too dry: "they don't keep all winter," said J.R.

226 278 Creek fish, trout, were stupefied with the leaves of a plant called s'ikahi that grows in the lower foothills. The bush is six to eight feet tall, has leaves round and a bit larger than elderberry leaves. These were pounded, mixed with mud, and tossed on the water of pools. "It makes the fish sick. It kills them." But it did not affect the quality or flavor of the food: "it doesn't get into the meat." When the fish come to the surface, "everybody" came out with baskets and dipped them up. "You get the basket right under them, throw them out." Sometimes men and women caught them with their hand [presumably when the fish were stupefied, not by underwater diving as described for more southerly Yokuts].

These fish were small, three to four inches. They were cooked in hot ashes (not coals), which cooks but does not burn them. [25 a52] Some fish were eaten at once, for supper, but the majority were dried for later use.

251 In preparation for drying they might be cooked first or not [perhaps depending on weather conditions], though usually they were not. When drying, they were laid out [cleaned?] on flat rocks and took two or three days to dry. "They are dry just like a cracker." As much as half a sack of these would be put away by a family for winter consumption. Enough for a 252 meal was taken out, cooked in ashes, and then 251 pounded up to be eaten with acorn mush. "They are a little bitter, not much, when you eat them." said J.R. [There was a suggestion, not clearly stated, that fish meat was dried, pounded, and put away like pemmican.]

226 In Chukchansi territory Powers saw fish weirs with inserted traps into which the fish were driven from upstream by means of a brush sweep like that of the Wobonuch (see below). The Chukchansi also speared fish from a booth

● 226 over the water such as Mayfield described for the Choinimni (see above).[99]

Firewood, Firemaking

313 Pine, oak, manzanita, chaparral, live oak, "any kind" of wood, was used for making fire, said N.W. To fell a tree, it was burned around its base. Baskets of water were kept at hand to control and eventually to quench the flames. No stone ax was used. Both sexes carried wood, which was bundled up with string and then
313 ported by tumpline. A piece of flat bark was
482 laid on the back and held in place by the load, to protect against bruising. A person could carry about five logs, four feet and eight inches in diameter, or more if the logs were smaller, N.W. thought.

313 Dead trees were felled by putting live coals at the base. When a tree burned through and fell, the fire was extinguished with earth. Logs were severed by burning through, leaving lengths suitable for transport. House, assembly, and sweat house fires were banked, so coals were readily available for relighting, said J.R.

372 Buckeye wood, for fire-drill hearths, was collected and stored. The fire drill [wood?] was worked in a hole at the edge of the hearth; the drill was rotated until smoke issued. [Continuing, or another method;] A piece of oak gall was set on the hearth and the drill rotated in it until it ignited. This was picked up and sparks from it were blown on dried grass or leaves. The process took two to five minutes. J.R. saw his father make fire this way; he himself never did it.

There is a growth on an oak tree "something soft and thick, maybe like rubber," which is essential in preparing fire, said N.W. This is laid on top of a buckeye board hearth, which in turn is laid over some plant material (mesini, wormwood) which has been dried and rubbed into powder. A buckeye (sic) drill is twirled between the hands on the hearth; both the oak growth and mesini catch fire. "It takes both to make the fire, neither one will ignite by itself." It took about thirty minutes to start a fire; it ignites suddenly "just like gas going off." Then the burning material was moved onto a rotten log, or whatever firewood was to be started. People who had no fire got it from this, took it to their own home. Ordinarily fire was got from neighbors, and it was only on rare occasions, when all fires had gone out, that firemaking operations were necessary.

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[99] Powers, 376.

Fishing

Y W 226

Fish were scarce in the upper streams in Waksachi territory, said B.O.[162] They were captured by poisoning; no spear or harpoon was used (B.O. and S.O.). (Perhaps because of the smallness of the streams in their vicinity.) A plant called ya ʻohao (not soaproot, but unidentified) was mashed and scattered over the water. The fish became active, jumping around in the water, then became stupefied, when they were scooped up in fish baskets. Men prepared the poison, merely by mashing the plant leaves, but both sexes took part in capturing the fish.

Foods

Y W 263 258

Salt.---Salt was obtained from "a bush that looked like a tomato vine." While living at Čoloku (on Fisher's Ranch), S.O.'s father-in-law and his mother's sister used to gather it. To obtain the salt a pit was dug about 2 feet long, 1 foot wide, and 1 foot deep. In this a fire was built and let burn down to coals. A grating was made by laying hardwood sticks across the earth's surface and on this the plants were laid. The whole thing was fanned with a fire fan. A material then oozed out of the plants and dropped on the coals forming large lumps. Then the whole thing was covered with earth and left overnight. In the morning the pit was opened and the salt, which was now a hard large mass, was cleaned of dirt. These lumps were trimmed and sold. This salt was eaten in tiny bits with meat; it was never put directly on food or cooked with it. The plant (or grass ?) which produced this salt was called in Michahai, ti ʻkːt koi ʻyo (smells salt), in Wukchumni, a ʻlːt, and in Waksachi, u ʻnabⁱ. It was sometimes boiled and the liquid drunk to cure nausea. Salt or brackish springs were all called tuša ʻo.

Y W [264]

Y W [439]

Rock salt (koiyo, Michahai) was obtained in trade from the Eastern Mono.

Y W 272 263

Manzanita cider.---Manzanita berries were gathered, mashed on a tray with a small pestle, and put into a sieve above a large clean mush basket. Water, poured over the mass, seeped through into the larger basket. A powdered plant called ča ʻmːt (Michahai; pasida, Spanish; unidentified) was added as a thickener and flavorer. There were four or five such flavorers known, but S.O. could not name them. The manzanita drink thickened as it stood, and people came to drink it at whatever stage they preferred. It began to sour after twenty-four to forty-eight hours and was no longer thought fit to drink. S.O. insisted that it was in no sense intoxicating.

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[162] Trout should be abundant; possibly he meant scarce in comparison with the numerous varieties of the lower foothill rivers and sloughs.

2: Kroeber E-5 (ca. 1918) 1953
NS29 Yokuts NS29

any gap of distinctive process from that of obtaining grasshoppers, caterpillars, maggots, snails, mollusks, crawfish, or turtles, which can be got in masses or are practically immobile: a woman's digging stick will procure worms as readily as bulbs. Again, it is only a step to the taking of minnows in brooks, of gophers, or lizards, or small birds: the simplest of snares, a long stick, a thrown stone even, suffice with patience, and a boy can help out his grandmother. The fish pot is not very different from the acorn receptacle, and weirs, traps, stiff nets, and other devices for capturing fish are made in the same technique of basketry as the beaters, carriers, and winnowers for seeds. Even hunting was but occasionally the open, outright affair we are likely to think. Ducks were snared and netted, rabbits driven into nets, even deer caught in nooses and with similar devices. There is nothing in all this like the difference between riding down buffalo and gathering wild rice, like the break from whale hunting to berry picking, from farming to stalking deer.

The California Indian, then, secured his variety of foods by techniques that were closely interrelated, or, where diverse, connected by innumerable transitions. Few of the processes involved high skill or long experience for their successful application; none entailed serious danger, material exposure, or even strenuous effort. A little modification, and each process was capable of successful employment on some other class of food objects. Thus the activities called upon were distinguished by patience, simplicity, and crude adaptability rather than by intense endeavor and accurate specialization; and their outcome tended to manifold distribution and approximate balance in place of high yields or concentration along particular but detached lines.

The human food production of aboriginal California will accordingly not be well understood until a really thorough study has been made of all the activities of this kind among at least one people. The substances and the means are both so numerous that a recapitulation of such data as are available is always only a random, scattering selection.

Observers have mentioned what appealed to their sense of novelty or ingenuity, what they happened to see at a given moment, or what their native informants were interested in. But we rarely know whether such and such a device is peculiar to a locality or widespread, and if the former, why; whether it was a sporadic means or one that was seriously depended on; and what analogous ones it replaced. Statements that this tribe used a salmon harpoon, another a scoop net, a third a seine, a fourth poison, and that another

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NS29 Yokuts NS29

built weirs, give us in their totality some approximation to a picture of the set of activities that underlie fishing in California as a whole: but for each individual group the statement is of little significance, for it is likely that those who used the nets used the spear and poison also, but under distinctive conditions; and when they did not, the question is whether the lack of one device is due to a more productive specialization of another, or to natural circumstances which made the employment of this or that method from the common stock of knowledge impracticable for certain localities.

There is, however, one point where neither experience nor environment is a factor, and in which pure custom reigns supreme: the animals chosen for the list of those not eaten. Myth, magic, totemism, or other beliefs may be at the bottom; but every tribe has such an index, which is totally unconnected with its abilities, cultural or physical, to take food.

Among the Yokuts, one animal stands out as edible that everywhere in northern California is absolute taboo and deadly poison: the dog. The Yurok give as their formal reason for not drinking river water that a large stream might contain human foetuses or a dead dog. The Yokuts did not shrink from eating dogs.

Coyote flesh was generally avoided, whether from religious reverence or magical fear is not clear. Grizzly bear meat was also viewed askance. The bear might have devoured human flesh, which would be near to making its eater a cannibal. Besides, in all probability, there was a lurking suspicion that a grizzly might not be a real one, but a transformed bear doctor. The disposition of the animal showed itself in the muscular fibers bristling erect when the flesh was cut, the Yokuts say. Brown bears had fewer plays of the imagination directed upon them, but even their meat was sometimes avoided. Birds of prey and carrion from the eagle down to the crow were not eaten. Their flesh, of course, is far from palatable; but it is these very birds that are central in Yokuts totemism, and the rigid abstinence may have this religious motivation. All reptiles were unclean to the southern Yokuts, as to the Tübatulabal; but the northern tribes exercised a peculiar discrimination. The gopher snake, water snakes, and frogs were rejected, but lizards, turtles, and, what is strangest of all, the rattlesnake, were fit food to the Chukchansi. There is a likely alien influence in this, for the neighboring Miwok probably, and the Salinans to the west certainly, ate snakes, lizards, and even frogs. On the other hand, the southern Yokuts relished the skunk, which when smoked to death in its hole was without offensive odor; while to the Miwok and Salinans it was abomination.

2: Kroeber E-5 (ca. 1918) 1953
NS29 Yokuts NS29

that a shout could be heard across it, two warriors famous for dodging stepped forward from each tribe, and each shot one flint-tipped deer arrow from fully bent bow at his companion. Then these men, and they only, shot the crazed antelopes as they circled about within the human inclosure, or sometimes ran until they dropped from fear and exhaustion. Certain of the antelopes with peculiar horns were believed to sing as they ran, with ground owls sitting on their heads. These individuals were spared. The mimic warfare no doubt had magic intent; but the delegation of the shooting to select men served to keep the circle intact, which would certainly have broken under the excitement of every man aiming his arrow at his own quarry.

A safe though far from certain way of hunting bears was to shoot them on moonlight nights from a sort of nest constructed in a tree in their acorn feeding grounds.

When the geese traveled, inflammable brush was piled up, and when the birds were heard approaching on dark, still nights these were suddenly lit. The birds swooped down to the flare, and in their bewilderment were easily killed.

Pigeons were snared in the earliest morning from a comfortable brush booth with a grass window looking out on a leveled platform on which a live decoy was staked and bait scattered. The running noose was on a stick that was slowly shoved through the curtain until a bird stepped within. The victim was smothered with the knee, and the flock soon returned to feed. (Pl. 46.) The decoy was carried in a spindle-shaped cage.

The Yaudanchi capture of eagles was modeled on the principle of their pigeon taking. The hunter lay in a concealed hut of brush. He did not look at his quarry until it was caught, fearing that it flee his glance. Outside were placed a stuffed animal skin as bait and a live hawk as decoy. The trap was a noose fastened to a bent-over pole sprung from a trigger. Before the eagle was killed by being trod on, it was addressed: "Do not think I shall harm you. You will have a new body. Now turn your head to the north and lie flat!" Only men who knew this prayer and the necessary observances undertook to kill eagles.

Of the many ways of capturing fish, a few more unusual ways may be mentioned. Completely darkened booths were built, in which a man lay to spear the fish passing beneath. This device suggests the pigeon snaring and eagle taking arbor. Small fish could sometimes be taken with the scoop-shaped openwork baskets of the women. Poisons were two: ground buckeye nuts with earth stamped into them and crushed *sademe* leaves. Soon after these preparations were thrown into a small stream the fish began to float on the

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NS29 Yokuts NS29

226 surface. The *t'unoi* net was fastened to a circular frame on a pole, held vertically, and raised. The more usual Californian net of this type is on a half hoop, and is used rather for scooping or horizontal lifting.

263 Salt may have been obtained at springs, but the reported cases are from the Pitkachi, whose "salt" stank; from the Chukchansi, who went to the plains to scrape a sort of alkali off the ground; and from the Yaudanchi, who, with other southern tribes, gathered a salty grass known as *alit* and beat it on stones to extract the juice; which was particularly favored with green clover.

THE BOW.

411 Common bows for small game were little more than a shaped stick; good bows were carefully smoothed of large mountain cedar wood and sinew backed. The commonest type, primarily for the hunt, was nearly as long as a man, of about two fingers' width and the thickness of one. The ends were recurved, probably through a curling back of the thickened sinew. Bows made specifically for fighting were shorter, broader, and flatter, and pinched in the middle. Except for being unpainted and probably not quite so extreme in form, this type appears to have been the same as the northern California one.

Mention of the right and left end of the bow makes it seem to have been held horizontally, or at least diagonally, as by most California tribes.

The arrow, *shikid* generically, had three forms among the Yaudanchi, known as *t'uyosh*, *djibaku*, and *wuk'ud*. The war arrow had no foreshaft, but a rather long wooden point, notched. It measured from the finger tip nearly to the opposite shoulder or a trifle more than the possible pull of the bow. The Mohave also fought with arrows lacking flint tips. The ordinary hunting arrow had a long sharpened foreshaft, but no real head. The deer arrow had foreshaft and flint head, but the foreshaft was socketed without glue or tie, so that the main shaft would disengage after hitting.

413 The prevailing arrow straightener among the Yokuts is the southern California form: a well-shaped rectangular block of soft stone, often rounded or ridged on top, and invariably with a polished transverse groove. (Pl. 49, *a*.) This implement is undoubtedly associated with the employment of cane for arrows: the Yokuts are known to have used this plant, though not exclusively. The joints were warmed in the groove and bent by hand or on the ridge after the stone had been heated; the groove was also used for smoothing. The holed straightener of wood or horn for wooden shafts, as employed all over northern California, has not been reported from the Yokuts.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

On the location of the later white village of Bates, on upper Cottonwood Creek, was the Chukchansi village of *Cheyau*. Farther east, and about six miles south of O'Neals, was the village of *Dinishneu*.

The southern Yokuts called the San Joaquin River *Tihshachu*, meaning salmon spearing place. Indians traveled great distances to spear salmon on the shallow sand bars there.

On the north side of the San Joaquin River, between the foothills and the Big Bend at Mendota, were the *Hoyima*. About a half mile below the Herndon bridge was the Hoyima village of *Chayo*. Another Hoyima village was located about three miles upstream from the Herndon bridge. It was named *Atabo* (Ah-tah'-bo). On both sides of the San Joaquin, about two miles above Lane's Bridge, was the Hoyima village of *Yimshu*. On the north side of the San Joaquin River and about three miles above the mouth of Big Dry Creek, was the Hoyima village of *Moloyu*.

Across the river from the Hoyima were the *Pitkachi*. On the south side of the San Joaquin River, at the site above the Herminghaus Ranch and known as Rancho de los Californios, was the Pitkachi village of *Gewachiu*. Another of their villages was *Kohuou* (Ko-hoo-o'-oo), located near where the town of Herndon is now.

At the junction of Little Dry Creek and the San Joaquin River were the *Wakichi*, and above them the *Kechayi*. Table Mountain on the south side of the San Joaquin River and upstream from present Millerton Lake in Kechayi land, was called *Tapu Chilow*. South of Table Mountain was the village of *Muhnowlo*. North of Table Mountain, on a large flat by the river where the Indians speared salmon, was the Kechayi village of *Kiahno*. During the time when salmon were running, every bush and most of the ground in the vicinity was red with drying salmon.

East of the Kechayi, on both sides of the San Joaquin were the *Toltichi*.

Opposite the Keychayi were the *Dumna*. Little Table Mountain, on the north side of the San Joaquin River in Dumna land, was called *Shishilu*. South of Little Table Mountain, on a small flat, was the Dumna village of *Chahtaou*. Nearer the river was the village of *Wayahchu*. *Wumwumwus* (Woomwoom'-wus), meaning rock pile, was the Dumna name for the round lava cap a half mile northwest of the Indian settlement

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

tendencies. It is entirely in keeping with what is known of primitive cultures that this should be characteristic of a plains people. Only one who has been afoot upon the broad San Joaquin Plains before the days of well water can appreciate the tremendous importance of a horse to such people.

During the time when salmon were running they undoubtedly stored up considerable supplies of the dried flesh of these fish and it is probable that they had permanent villages upon the eastern bank of the San Joaquin River, where fishing was carried on at all times.

From the San Joaquin River to the Sierra foothills was a distance of about thirty miles, all of which was dry and barren plains that made quite difficult the problem of gathering and transporting acorns during the season in which they were ripe.

The antelope surround was probably a regular practice among these people, as was quite likely also the jack rabbit drive. Consequently the plains tribes used rabbit and antelope skins to a considerable extent. Their equipment was of a more mobile nature than that of the river tribes, but was constructed of materials somewhat similar.

The plains lying between the San Joaquin River and the Sierra foothills were roamed by countless antelope. There were many elk along the river. But the hunting of these animals was a very uncertain venture when the hunter was afoot. There was no more valuable aid for which the Chauchila Indians might have wished than a horse. As a consequence, when the Spanish first came with horses and when the American explorers and settlers arrived, they soon came to call these people "the horse-thief Indians."

The following quotation from Frémont's *Memoirs* will give the reader a definite idea of the behavior of these people. This account shows very clearly how similar in behavior were the plains people of the San Joaquin to those of the Great Plains of the middle west:

"December 19, 1845. In a few hours we reached a beautiful country of undulating upland, openly wooded with oaks, principally evergreen, and watered with small streams which together make the *Mariposas* River.

"Continuing along we came upon broad and deeply-worn trails which had been freshly traveled by large bands of horses, apparently coming from the San Joaquin Valley. But we heard enough to know that they came from the settlements on

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

together with twisted hemp or tule rope, or with willow withes. They were pointed at the ends, which were higher than the middle.

In the center of the raft was left a fish spearing hole about a foot in diameter. In front of this hole was placed a thick layer of mud and upon it was kindled a fire. Here game and fish were cooked as needed.

We are told that from two to four Indians would board one of these rafts and go onto the lakes hunting and fishing, to be away from shore for as much as a week or two. During this time they slept upon the raft, or upon the tule islands in the lakes, and fished and hunted and cooked the meat and fish at the fire place on the raft.

The Indians learned to make their tule rafts a very effective aid to their hunting and fishing. They threw loose tules over the raft and themselves as a blind, and poled the raft about the lake, thrusting the pole through the hole in the middle. In this way they were enabled to approach within a few feet of ducks and geese and other water fowl. At places where antelope and elk watered at the lake, or in the streams where they entered the lake, the Indians were also able to approach those animals quite closely and to shoot them with bow and arrow.

It is probable that the hole in the middle of the raft was first made for use in spearing fish. We are told that fish used to collect in great numbers under the natural tule mats. The mats were drifted by the wind and the Indians used to walk about over them and spear fish through holes which they cut in the mats. Under the mat there was no reflection from the sun and it was easy to see the fish as they passed underneath. It was also impossible for the fish to see the fishermen.

The lake trout, which were greatly prized as food by the Indians, attained a great size. Mr. Fred Wells of Tulare, now past 96 years of age, who fished for the market on the shores of Tulare Lake, tells us that as late as 1880 he caught lake trout weighing more than twenty pounds and more than three feet in length.

Pioneers who came in the early '50's, when the stock of fish had not been depleted, tell us that the fish at that time traveled in great schools which in places almost entirely displaced the water. White fishermen of the 1870's and '80's caught in one haul of a horse-drawn seine as many as eight tons of fish. One of the fishermen who engaged in this work was

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

"Jackrabbit" Bill Browning, who passed away near Delano about 1935. Surely the old lakes were a fisherman's paradise.

In addition to the lake trout described, a small turtle was captured in great numbers and shipped to the San Francisco market. Tulare Lake terrapin was a common article on San Francisco and other bay city menus.

SPEARING FISH

Although we hear much about hunting with bows and arrows and we see some bows and arrows in collections of Indian relics, it is probable that throughout a great portion of the San Joaquin Valley the spear was in as common use as was the bow and arrow. This is particularly true along the tule swamps and lake shores throughout the central portion of the valley. And who has seen a Yokuts spear?

From about the shores of Tulare Lake a collection comprising almost 1,000 chipped stone points contains approximately 700 that would be classed as too large for use with an arrow. Several hundred of them are larger than needed for a spear. From what we know concerning the life of the Indians who were here when the white people came, a considerable portion of the fish taken from the lake were obtained by spearing. How this was accomplished upon the lake has been outlined in the preceding chapter concerning fishing rafts.

For a description of the method of taking fish along the various valley streams, we are again indebted to Mayfield. His description brings home to us the fact that the modern salmon spear, or gig, having a detachable point, was used by the local Indians long before white people were known in this territory. His account follows:

"Trout and other large fish were speared with a gig almost like a modern salmon gig. It had a long slender pole for a handle.

"This pole was often as long as twenty feet, and about an inch in diameter. It would be as straight as an arrow, and as smooth as glass.

"A fisherman took a great deal of pride in his fish gig and would keep it polished until it was shiny.

"On the larger end of the pole they would fit two short, pieces of hardwood or bone. One of these was sharp, was lashed on one side of the big end of the pole, and projected beyond the end of the pole about four inches. The other piece was

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

227 shorter, and blunt on the end. It was lashed opposite the first, making the two projecting pieces about an inch apart.

"On the blunt end of the second piece was fitted by means of a socket a short, sharp piece of bone or hardwood. It was attached to the pole by means of string through a hole near the middle.

"This string had several inches of slack in it. When the fish was speared, the unjointed tip would pull out, and the socketed tip would be disengaged and turned crossways inside of the fish.

"The fish was then attached to the end of the pole with a short piece of string and could be hauled in without any danger of breaking the gig with its struggling.

"I believe that the unjointed point was necessary in order to keep the other point from slipping off the fish.

"In using the gig they built a sort of scaffolding over the water. A deep place in the stream was selected and two long poles set on end ten or fifteen feet from the bank.

"These poles were about ten feet apart at the bottom and crossed at the top about level with the bank. Where they crossed they were lashed together.

"Then the ends of two more long poles would be placed in the crotch above where the first two poles crossed, with the other ends resting on the bank about ten feet apart.

"This formed two V shaped arrangements with the points of the V's together, the open part of one on the bed of the stream and the other on the bank.

"Across the horizontal poles were laid smaller poles and branches to make a dense shade. The fisherman lay on his stomach on top of the branches and dropped the point of the gig down through an opening in them.

"When the fish passed into the shade below, it could be seen and was promptly gigged."

226 136 251 Many of the fish obtained in this manner were known as steel heads; they were large fish resembling both the salmon and the trout. The meat of these as well as many others, was dried and smoked in large quantities. Being cured in this way, the fish could be preserved from one year to another. Along the San Joaquin river, we are assured that many tons of salmon were taken each year during the annual "run" and that the bushes and banks about the rancherias were red with drying fish.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

Earlier in this account attention was called to the great numbers of large spear points found on the beds of Summit, Tulare, Goose, Buena Vista and Kern Lakes when those bodies of water first ceased to exist. From statements made by old lake Indians we know that many of these points were lost from Yokuts spears when those people were hunting raccoon, mink, otter and beaver around the old lake shores. But that is not the whole story. Some of the points were eight inches in length and thousands were more than six inches long, all too large to be used on a spear. 226

Actually, tens of thousands of beautiful spear points were found where the deepest waters had been, ten and more miles from some of the old shore lines. Although most white pioneers classified these old points as fish spears, we know that the Indians *did not* spear fish with such points. Said *Tawp'-naw*, an aged *Wukchumne* Yokuts, "Mr. Latta, I betcha you spear five hundred fish with one them *kots* [stone] spears, you don't catch *one*, I betcha." And Tawp'-naw was undoubtedly correct. There had to be some other answer.

It was many years before I found an Indian who could speak from actual experience of the whole lake culture, and who could describe accurately and in detail the practice of taking fish from tule rafts on the San Joaquin Valley lakes. This aged Yokuts was Josie Alonzo, or *Yoi'-mut*, last survivor of the *Chunut* (Choo'-noot) tribe, which once in great numbers occupied the northeast shore of Tulare Lake. 226 115

After Yoimut had answered a thousand questions and I was amazed at the wealth of information she had and the accurate way in which it checked with data gathered from other aged Yokuts, I showed her several dozen large spear points, asked her the use to which they had been put by the Chunut. This was her answer: "They use 'em to catch fish."

That was the only one of all answers given me by Yoimut that I would have questioned for a second. I didn't know what to say.

Yoimut quickly saw that I didn't know how the spear points were used and that I didn't believe her. So she described to me the following practice, something I might have deduced, but which would not have been known as a fact without her statement:

"Sometimes when them Chunut went fishin' on them tule rafts out on Tulare Lake, they didn't catch any fish. Maybe 226

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

three or four days they didn't catch any fish. Then they come back to camp and get that Indian Doctor. They take him along. He got nice, long, *kots* [obsidian] points like you got here. Sometimes, too, he got good rock like your white boy's spin-top [plummet, or plumb-bob shaped stones].

"That Indian Doctor, he make fire of some good kind of weeds. He talk, and talk, and say his good prayers over that fire. All the time he hold his good kots point like big spear point over that fire. Pretty soon that Indian Doctor begin singin'.

"He get up and dance little bit on that tule boat. He hold that kots point in one hand. When he finish dancin' and singin' all his good songs, then that kots point is *tripne* (trip'-ne) [has supernatural power]. Then that Indian Doctor throw that tripne kots point in the lake. Then them Indians catch lots of fish. But they got to pay that Indian Doctor lots of good Indian money, maybe beads. They got three-four kinds beads they use like money."

And that, in my opinion, is the entire secret of the thousands of fine, large spear points found on the dry bed of the old valley lakes.

THE RABBIT DRIVE

San Joaquin Valley pioneers who attended the rabbit drives held by white people during the early eighties will perhaps be surprised to learn that this method of taking rabbits was practiced by the Indians on the same grounds many generations before the white man came.

The number of jack rabbits which a barren, desert country will support is unbelievable to the person who has not seen them. During the Fall of 1929, within ten miles of the city of Tulare, in the area of less than ten acres, the writer saw a swarm of rabbits which undoubtedly numbered not less than 1500. These rabbits had taken refuge in a field which was covered with tumble weeds. As the car passed along two sides of the field the rabbits swarmed across the road in bands of fifty and one hundred. In places they were almost as thick as driven sheep. This is largely the condition in many portions of the San Joaquin when it was occupied by Indians. In those areas the rabbits were commonly taken by driving.

The elaborate preparation made by the white people was of course unknown to the Yokuts, although we are assured that

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

it was an occasion of great enjoyment and feasting, and in that way closely resembled the rabbit drive of the eighties, with its large cans of hot coffee, wagon loads of bread, and barbecued beeves.

Instead of the fence built by the white people, which was often two miles in length and made of wire netting or lath fencing, the Indians themselves formed the line. Instead of the pen into which the rabbits were driven by white people the Indians used a net made of milkweed string against which the rabbits ran, and where they were killed.

A detailed account of the rabbit drive as practiced by San Joaquin Valley Yokuts was furnished by T. J. Mayfield, who has been so freely quoted in these sketches and who was raised by the *Choinimne* tribe of Yokuts Indians. The Mayfield account follows:

"One of the great sports at the lake was the jack rabbit drive. The flat sage brush plains around the lake were fairly alive with jack rabbits, and the Indians used to plan a drive much like the drives later made by the white people, except that they used no pen or corral.

"A milkweed string net was made. This was about thirty feet long and four feet high. It was tied like an ordinary fish seine, but I never saw the Indians seine fish.

"The net was used for catching rabbits. The net was erected between two large sage bushes. Then a long line of Indians marched out at an angle from each end of it.

"The most of these Indians carried a stick about two feet long. When the two lines of Indians had formed wings several yards long the outer ends closed in and then they drove the enclosed rabbits toward the net.

"When an Indian came close enough to a rabbit he would throw his stick at it and would generally break its legs. But the most of the rabbits were killed at the net.

"As the rabbits ran along between the two lines of Indians they saw what they thought was an opening in the line at the net. They attempted to run through this opening, but hit the net and bounced back. Then they were promptly clubbed by one or two or three Indians who were hiding there for that purpose.

"It surely was exciting when the drivers had closed in. There would be hundreds of rabbits, and almost as many sticks flying in the air. Many of the rabbits would break through the

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

these magic stones to vary much in size and proportions, but to be all of the same general shape. They are often referred to as plummets, or plumb-bobs, and are commonly known to collectors as charm-stones. 789 778

Charm-stones have been found throughout Yokuts territory. Along streams and about the shores of valley lakes they have been discovered in great numbers. Away from the old bodies of water they have occasionally been brought to the surface by plowing. When the waters of Tulare Lake began to recede during the late 1880's and early 1890's these stones were found by hundreds along the lower shores. Dr. Ed. Smith of Hanford made a large collection of them along those shorelines and in the lowest portion of the dry lake bed. He once told me that during one week-end, traveling with horse and buggy, he gathered one hundred and eighty-four Yokuts Rainmakers' charm stones.

Pioneer San Joaquin Valley residents have furnished numerous parallel data, stating that these stones were used to bring fish up the streams and to bring success in fishing. A few have stated that they were also used in connection with a rainmaking ceremony. Zachary T. Blankenship, of Visalia, once told me that they were used to bring water into streams during drought, and to induce the large trout of Tulare Lake to migrate up the various branches of the lower Kaweah River. Said "Zac", "Soon after it left the Sierra foothills the Kaweah River divided into six branches—Outside Creek, Deep Creek, Cameron Creek, Packwood Creek, Mill Creek and St. John's River, which, in its lower course, is known as Cross Creek. Sometimes the heads of some of these creeks would choke with sand and brush so that the water could not run down them. Then the Indian Medicine Men had to get busy with their plumb-bobs and put on a song and dance calculated to bring the water back. [226]

"Each year the large lake trout would run up some of the Kaweah Creeks, but they did not always run up all of them. This cut some of the Indian camps out of their fishing. They hung those plumb-bobs on the willow trees in order to make the fish come up to them. I never saw this done, but I know it to be true, for I was told about it by an old Indian who lived on Outside Creek. I found one of those plumb-bob stones hanging on a tree. It took my fancy. There was no one in sight, so I cut it loose, put it in my pocket and took it home. We had sev-

[text continues on p. 204]

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

have gone to see Mr. Crossmore, who had the right to that place. But we never knew it then, so we left.

The three men and my mother had worked about a week making a tule boat to fish from. We children had helped by carrying tules. It was a real good boat. They had fished from it a lot. The boat was about twenty-five feet long and eight feet wide. It was made of tules like the old-time Indians used to make them. They made it on the ground at the edge of the water. We called it *Tutoi* (too'-toi).

The tules were just tied into small bundles as long as the boat and about six inches through at the middle. The ends were pointed. A lot of these tule bundles were tied together. They made a big boat about three feet high. I think it took about twenty small bundles.

An extra bundle was tied along the top on each side so things would not lose off of the boat. The ends of the tule boat were higher than the middle.

In the middle of the boat a hole was made to spear fish through. It was a small hole about a foot across. We called it *kot-la'-um*. At the front end of the boat was a hole where they put the fish and ducks they caught out on the lake. It was about three feet square and a half foot deep. The men used to bring this place in full of fish and ducks. This hole was lined with tules woven together like a basket. We called it *traw-trawk'-oi*.

At the back end of the boat was another hole filled with mud. They built a fire on this mud and cooked fish and ducks while they were out on the lake. We called the fireplace *tri-ahn'-cut*.

Sometimes they stayed out on the lake fishing for three or four days. When they stayed out a long time on the raft they used to cut the fish open and smoke them over the fire and lay them on the raft to dry. When they came in the fish were almost dried. They used to cut the meat off the ducks and dry it the same way. They used long poles to move the raft around. We called these poles *iyahish* (i-yah'-ish).

When they came in with the boat we would all help to pull it up on the bank to dry out. When it would dry out it was very light. This boat carried all of us very easily. I think it would have taken that many more people.

Finally my stepfather changed his mind. He decided to go across the lake on the boat to *Chaw-lo'-win* on Atwell's Island.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

Soon it was dark and we were all cold and wet. It was just as wet on the boat as if we were in the lake. We could all swim, but we were afraid all of the time, because the water was about seven feet deep and the rough water would drown us if we fell in it. So we stayed awake all night and shivered and held on to each other.

When it got daylight we could not see the land in any way. We could see the Kettleman Hills and the Sierra, but we were away out in the middle of the lake. The water was too deep to reach bottom with our poles. The wind was all gone, so we had to wait.

We stayed out there all day. It looked like we stood right still. I guess we did. There were lots of fish under the boat. My stepfather speared lots of nice ones. We could look down through kotlaun, the spearing hole, and see nothing but fish.

It was hot in the daytime, so we all got dry and warm. We made a fire and cooked fish, using the loose dry tules to burn. We were not hungry and we were not afraid any more, but we did not see how we were ever going to get to land. We stayed there all of that day and that night. It was a nice moonlight night and very pretty on the water. My mother told stories and sang for us almost all night and we had a good time.

When it came daylight again we could just see the tules on Chawlowin. But the tule boat looked like it was just standing still. My stepfather could just reach the bottom with our longest pole. We stayed out there all day again, and we got pretty tired of it. By dark my stepfather and my mother could use the poles on the bottom and they worked almost all night pushing the raft toward Chawlowin. By daylight we could see the land about a half mile away. Almost as soon as we could see, a heavy wind started up and in a few minutes the boat hit the bottom about one hundred yards from the tules.

Before we could get off the boat three or four men waded out to meet us. One of them was my mother's brother. We were very glad to see him. The men helped us to the shore and then they began to push the boat around to the west where they had a camp. It took all the rest of the day to get it around there.

We walked along the lake to the camp through a narrow trail in the high tules. Sometimes the water came up to our knees. The north wind was blowing hard again and that made the water come in on the land.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

old-time Indians catching elk with a rope like a reata fastened to an oak tree. They bent a limb down to hold the rope. I never saw that, but I am sure they did it.

Once, while we were at Chawlowin, we caught *sah'-pahl* [jack rabbits]. We called the drive *How'-sik Ho-ah'-mah.* There were only about fifty of us to help, but we caught about three hundred rabbits. I helped with two or three other drives near Armona, too. We went to the land east of Chawlowin to catch the rabbits. Most of us just waded across. The water was just up to our waist at the deepest place.

There were thousands of jack rabbits in the brush around the lake. We could see at least three hundred in the open places at one time. We drove them toward the net and made a close line to hold them. Everybody had a stick to throw at the rabbits. We called it *wah-traw'-he.* It was not crooked. It was almost straight. We killed lots of the rabbits with the sticks before they got to the net. When we threw the stick it whirled around and broke their legs if they were running. It was easy to kill jack rabbits with wahtrawhe if you got close to them. Sometimes they would sit quiet until you were right close. If you looked close you would see them and hit them before they jumped up.

When the rabbits got close to the net two or three men ran in with their clubs and killed them. The rest of us stood close together and kept them from running away.

The rabbits were skinned and the meat dried. We did this on the land east of the lake before we went back to Chawlowin. Dried rabbit meat was good with salt from salt grass on it. The skins we cut up to make blankets and capes.

There were lots of fish in Tulare Lake. The one we liked best was *a'-pis,* a big lake trout. They were real big fish, as big as any salmon, and good meat. There was another called *took'-mun.* I think the white people called it chub. It was not a very good fish.

One of the lake fish was *pahl-hoo'-ish.* It was the one you call sucker. Sometimes the steel-heads came in the lake too; so did the salmon. We called the steel heads *tah-wah'-aht* and the salmon *ki'-uh-khot.* We dried lots of fish. When it was dried and smoked, the salmon was the best. We ate salt grass salt with the dried fish. That made it good.

Another great big fish used to come in the lake sometimes. I remember that we caught one at Heuumne when the water was

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

136
159 low in the creek. We called it *caw'-cuts*. White people call it
226 sturgeon.

While we were at Chawlowin some white men put cattle
159 on the island. The water was low and they drove them across
648 from the east. There were hogs there already, but they were wild. As soon as the white people found out we were there we began to have trouble. The tules were getting dry and we were afraid the white people would burn us out. So we all left. My mother and stepfather took us to Tejon Ranch. We went in his brother's little wagon.

YOIMUT'S STORY
OUR LAST HOME

159 From *Chaw-lo'-win*, where Alpaugh is now, we went to the
361 Indian camp above the Tejon Ranch house. There were about
166 two hundred Indians there. Some of them were *Wowol* (Wo'-wol) and two *Chumut* (Choo'-noot) who were related to my mother.

159 My mother had been at Tejon Ranch when she was first
648 married. It was before the soldiers took her from Tulare Lake to
166 the Fresno River Reservation. She was at Tejon about six months, I think. It was called Fort Tejon then. It was not up in the canyon where the Indians are now, or in Grapevine Canyon where the Los Angeles highway is now. It was about three or four miles west of the ranch house, on a creek below the hills.

The soldiers lived in tents close to the Indians. I am sure of this. My mother showed me the place and told me all about it. That is the place they called Fort Tejon then. It was not up in the mountains. The Indians raised some crops of wheat there close to the hills.

When I was at Tejon Ranch we stayed up in the canyon.
[578 My stepfather worked on the Tejon Ranch for a while, but none
197] of us liked it there. The Indians there did not talk our language.

There were more of our people at Tule River Reservation, so we decided to go there. The people at Tejon Ranch wanted the Indians to go to Tule River. Some went before we did. We drove along the foothills in the same little wagon we had brought from the Armona village.

My mother and some of the other Indians told me about the old *Tulamni* (Too-lahm'-ne) village at the end of the hills by the west side of Buena Vista Lake. The Indians had lots of fights with the Spanish there.

4: Gayton E-5 (1925-1930)1946
NS29 Yokuts NS29

Pleasure came from their beauty, their fragrance, and their indication of a plentiful seed harvest to follow. Winter rainbows forecast plentiful seed crops, for they were seen as four bands of color (magenta, blue, yellow, orange) of four flowers whose seeds were prized.[12]

In April, when rattlesnakes were rousing from hibernation, came the very important Rattlesnake Ritual, sponsored by the shamans controlling the creatures, and participated in by all persons as a preventative from injury by rattlers during the summer months. This ritual, which included a snake-handling display and concluded with a feast, was attended by both local and extra-community persons.

On the lower Kings River, the Choinimni (Y) and probably other tribes within the area of the spring salmon run (about May) held a simple river-side ritual at their principal fishing sites. The local chief ate the first salmon speared, after cooking it and praying to Salmon for a plentiful supply. Then others partook of a salmon feast, and the season, so to say, was officially open. (Some foods were "moiety-owned," e. g., blackberries and mushrooms north of Kings River; the possessing moiety collected but could not partake until they had feasted the other moiety with the food.)

Disruption of village life came in late spring or early summer—from May onward, depending upon the condition of the seed harvest. Chiefs directed the general exodus in a minor way, publicly stating that now was the time to go, and families departed for their habitual summer camps. At these, men caught fish and small game which they dried for winter use, and, as the women collected loads of seeds, transported the heavy burdens back to the village storage bins. There were no special ceremonies for this season of dispersed households; instead local and more spontaneous entertainment took place: there is record of shamans dancing at summer camps; there were pleasure dances in which both sexes participated; children played late in the long evenings; and stories (myth-instruction) were tabu. Camp locations varied with the change of crops—toward the valley, into

12 Play with flowers, so incompatible with conventional notions about Indians, was widespread in the West. Without especially seeking them the following references come to hand for Miwok, Maidu, Paviotso, Klackamas, and Taos: S. A. Barrett and E. W. Gifford, *Miwok Material Culture* (Bulletin, Public Museum of the City of Milwaukee, vol. 2, pp. 117-376, 1933), pp. 222-223; Stephen Powers, *Tribes of California* (Contributions to North American Ethnology, vol. 3, Department of the Interior, United States Geographical and Geological Survey of the Rocky Mountain Region, Washington, D. C., 1877), p. 325; Robert H. Lowie, *Notes on Shoshonean Ethnography* (Anthropological Papers, American Museum of Natural History, vol. 20, part 3, 1924), pp. 306-307; Melville Jacobs, *Texts in Chinook Jargon* (University of Washington Publications in Anthropology, vol. 7, pp. 1-27, 1936), p. 12; Elsie Clews Parsons, *Taos Tales* (Memoirs, American Folklore Society, no. 34, 1940), p. 121.

7:Powers J-5 (1871-1876) 1877 NS29 Yokuts NS29

436 instance, goods which cost them at the store $5 they sell among themselves for $3, or thereabout. This is done by the old Indians, who consider an Indian dollar better than an American.

252 [173] They say that, in remote times, they were accustomed to rub their acorns to flour on a stone slightly hollowed, like the Mexican *metate*, which was a suggestion of the mouse; but nowadays they pound them in holes on top of huge bowlders, which was a suggestion of the wiser coyote. On a [172] bowlder in Coarse Gold Gulch, I counted eighty-six of these acorn-holes, which shows that they must have been used many centuries.

283 224 For snaring quail, rabbits, and other small game, they employ cords made of a kind of "wild flax" found in the Sierra. I presume this "wild flax" is milkweed (*Asclepias*).

272 Manzanita cider is made of a much better quality than the wretched stuff seen among the Wintūn. After reducing the berries to flour by pounding, they carefully remove all the seeds and skins, then soak the flour in water for a considerable length of time. A squaw then heaps it up in a little mound, with a crater in the center, into which she pours a minute stream of water, allowing it to percolate through. In this way she gets about a gallon an hour of a really delicious beverage, clear, cool, clean, and richer than most California apple cider. The Indians consume it all before it has time to ferment, so that they do not get intoxicated on it.

226 In the mountain streams which empty into Tulare Lake they catch lake trout, chubs, and suckers. Sometimes they construct a weir across the river with a narrow chute and a trap set in it; then go above and stretch a line of brushwood from one bank to the other, which they drag down stream, driving the fish into the trap. Another way is to erect a brushwood booth over the water, so thickly covered as to be perfectly dark inside; then an Indian lies flat on his belly, peering down though a hole, and when a fish passes under him he spears it. The spear is pointed with bone, and is two-pronged. Still another method is employed on Tule River and King's [481 501] River. An Indian takes a funnel-shaped trap in his teeth and hands, buoys himself on a little log, and then floats silently down the rapids, holding the net open to receive the fish that may be shooting up. On Tulare Lake they construct very rude, frail punts or mere troughs of tule, about ten feet

7:Powers J-5 (1871-1876) 1877 NS29 Yokuts NS29

226 long, in which they cruise timidly about near the shore. There is a margin where the bottom is almost level and the waves run light; but the middle of the lake is of immense depth, and the billows sometimes lash themselves into oceanic proportions.

172 412 Around the lake and on King's River one will often find a family using a tolerably well-made stone mortar. They always admit that they did not manufacture these implements, but happened on them in digging or found them on the surface, and that they belonged to a race other than their own. They sometimes have the ingenuity to improve on them by fastening a basket-hopper around the top to prevent the acorns from flying out. On the west side of Tulare Lake these mortars are very numerous, and of course they must have been carried thither from the mountains.

285 On Tule River I saw the process of basket-weaving. Instead of willow twigs for the framework or warp, the squaw takes long stalks of grass, (*Sporobolus*); and for the threads or the woof various barks or roots split fine—pine root for a white color, willow bark for a brown, and some unknown bark for a black. The process of weaving is like that heretofore described; [237] the awl or needle was the sharpened thigh-bone of a hawk.

525 The Gualala style of gambling prevails all over the State, but the Yokuts have another sort, which pertains exclusively to the women. It is a kind of dice-throwing, and is called *u-chu'-us*. For a dice they take half of a large acorn or walnut shell, fill it level with pitch and pounded charcoal, and inlay it with bits of bright-colored abalone shells. For a dice-table they weave a very large, fine basket-tray, almost flat, and ornamented with devices woven in black or brown, mostly rude imitations of trees and geometrical figures. Four squaws sit around it to play, and a fifth keeps tally with fifteen sticks. There are eight dice, and they scoop them up in their hands and dash them into the basket, counting one when two or five flat surfaces turn up.

525 777 The rapidity with which the game goes forward is wonderful, and the players seem totally oblivious to all things in the world beside. After each throw that a player makes she exclaims *yet'-ni* (equivalent to "one-y"), or *wi-a-tak*, or *ko-mai-éh*, which are simply a kind of sing-song or chanting One old squaw, with scarcely a tooth in her head, one eye gone, her face

11: Gayton E-4 (no date) 1936 NS29 Yokuts NS29

They went and advised all their relatives that I wished to see them and to know them, and that if they wished to know me they could come, and go back to catch fish in the morning as they had always done.

At 10 P.M. there arrived a graceful native youth sent from the Ranchería Notonto to know if we had reached this point, as his captain [copy of Nov. 19: Toiÿya] had returned from the fiesta at Chischas which Joaspa had celebrated, and told them that we had come without doing any injury (as they had been told by the envoys from Soledad Mission). [He said] that they wished to know me and were awaiting me at their ranchería where the people were intending to fish in the river for me. As they had not killed nor sold any horses nor had any fugitive Christians among them had no fear. Heretofore [?] they had come out on solid ground to receive us, and if ever they had fought with any soldiers it was because of the falsehoods they had been told. I answered that they spoke and did well, but that because of having to talk with the Tache I could not come then, but that the day after tomorrow I would be with them in passing. He replied that this was agreeable since their captain had sent to invite other captains from neighboring rancherías to meet me, and that they would all be together for my arrival. This native was so gracious and vivacious as he spoke with me, his bravery was so manifest, and his manners so refined, that I presented him with a colored kerchief and some pinole. He departed at midnight much pleased.

Tuesday, 2.—Because of the fatigue of the horses and the dirtiness of the troop I remained here this day for the first to be refreshed and the second to wash themselves.

At 9 A.M. came four Tache chiefs, Mariano Tiesar, Goolill, Cullas, and Chilaxas. The last two are those who returned from Soledad the night before. Thirty-seven young men accompanied them, all of them prepared with hand nets for catching fish in this San Gabriel River [copy of Nov. 19: Kings River]. This they did before my very eyes, with great agility, diving quickly and staying under the water so long that I prayed. Some remained under five credos [during five "Lord's prayers"], others no less than three [*cinco Credos, y el que menos tres que yo rezo*]. After having caught sufficient large fish [*mojarras*], salmon, and others very palatable, I return with all to camp, to sensibly demonstrate to those who were living within the lakes and marsh (because of believing the lies of the Christian renegades) that they could all reunite and come out to live on their land without any fear. As they could not all be seen together, [I said?] that if the road was traversable, I alone would go to their ranchería or sites. At that they replied that they had already told me the cause of their separation, and that they would, by force if necessary, catch and take to San Miguel the Christians who were missing, so [they would?] reunite on firm land. They said that one could easily go on horseback until near the marsh of the lake, and that there they would carry me until they put me in a balsa to reach the ranchería. Although there were very few people there, they would be much gratified [they said]. I accepted, and they dispatched notice to prepare for my arrival.

*161 and 17 leagues north-northeast of San Jose. The ranchería of this name, he states, is now Christian, at San Francisco and San Jose. The mission books show a total of 105 baptisms at the two establishments.

It is reasonably plain that the Aguastos and the Chupunes occupied more or less the same territory—along the south shore of the eastern end of Carquinez Strait and the western end of Suisun Bay. The diaries and the baptism records both indicate that the original inhabitants were the Aguastos, who were missionized and removed. Their place seems to have been taken by another group of natives known as the Chupunes, who also were gathered into the fold at some period between the visits of Abella and Duran. Subsequent to the 1817 diary of Duran there is no further mention of this tribe. With respect to population we have only the record showing 105 baptisms. Since the conversion seems to have been quite complete, we may set the aboriginal value at no more than 150.

Let us now consider the Ompines. This group is placed by Schenck on the north bank of the Sacramento River at and above the junction of the river and Suisun Bay. Schenck also (p. 137) discusses the possibility that the Ompines and Julpunes composed a single group. In spite of an assumed similarity in names the Spanish [114] accounts are unequivocally explicit to the effect that there were two groups, not one, hence Schenck's hypothesis may be disregarded. With respect to location the later Spanish accounts bear out Schenck's contention that the tribe was situated north of the river.

In his entry for May 14, 1817, Duran says that his expedition stopped at the mouth of the San Joaquin River, whereas another boat (that of Argüello) stopped opposite "en tierra de Ompines." The next day they all went up the Sacramento River to the "remate de las lomas de los Ompines." Meanwhile Argüello, in his entry for May 15, says that they went along the north shore and stopped "donde termina la tierra de los Ompines." This puts the eastern edge of the Ompines at the east side of the Montezuma Hills in T3N, R2E, approximately as shown by Schenck. Altimira describes an unauthorized raid by Fr. Duran on the tribes north of Suisun Bay, among them ". . . otra ranchería aislada llamada los Ompines" (Altimira, MS, 1823).

A few of the earlier documents, on the other hand, contain statements which raise the possibility that the Ompines were not always confined exclusively to the north shore. In his diary of 1811 Abella describes how, on October 17, his party entered a big bay (Suisun Bay) and, after 5 leagues, following along the south shore, began to find estuaries and numerous islands covered with tules. They continued into the west channel of the San Joaquin and stopped at an island on which large trees were growing. At this point, somewhere near [361] Antioch, there was a "pescadero" of the Ompines. It is evident, therefore, that in 1811 the Ompines had at ● [226] least temporary fishing spots on the south side of the estuary, in an area usually ascribed to the Julpunes or Tarquines.

[990] The San Jose baptism book shows the conversion of 105 Ompines. Those from San Rafael and Solano do not mention the tribe. The fact that a tribe situated north of Suisun Bay does not appear in the records of either of these missions is noteworthy, since during the 1820's and 1830's the north-bay groups were brought to them in large numbers, and since we know from Altimira's comment on Duran's raid that the Ompines were still in existence in 1823. Furthermore, the Ompines must have constituted more than a single small village, for